



IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

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FILING DATE: December 28, 2001

TITLE: Customization of Tab-order Functionality in Internet Applications

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Commissioner for Patents
Washington, D.C. 20231

Sir:

PRELIMINARY AMENDMENT

The captioned application is U.S. Serial No. 10/040,397, filed December 28, 2001.

Before action, please amend the captioned application as follows.

IN THE CLAIMS

Please cancel claims 1-3 without prejudice. Please add the following scannable version of new claims 4-96.

1. (CANCELED)

2. (CANCELED)

3. (CANCELED)

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01 FC:103 1314.00 UP
02 FC:102 1512.00 UP

1 4. (New) A system for developing an application user interface, the system comprising:
2 an integrated development environment configured for a developer to specify a user
3 interface element in the application user interface, the user interface element
4 having a user customizable property, the application user interface being
5 configured as an interface between an internet application and a user;
6 an application designer configured to produce metadata characterizing the customizable
7 property; and
8 a data repository including a data record associated with the customizable property, the
9 data record being modifiable by a user of the internet application and accessible
10 using the metadata.

1 5. (New) The system of claim 4, wherein a state of the user customizable property is configured
2 to persist between a display of the application user interface and another display of the
3 application user interface.

1 6. (New) The system of claim 4, further including an application server configured to support
2 the internet application.

1 7. (New) The system of claim 4, wherein the integrated development environment is further
2 configured to associate the user interface element with a procedure within the internet
3 application.

1 8. (New) The system of claim 4, further including means for generating the internet application
2 interface.

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- 1 9. (New) A system for developing an application user interface, the system comprising:
2 an integrated development environment configured for a developer to specify a user
3 interface element in the application user interface, the user interface element
4 having a user customizable property, the user customizable property being a
5 response to a user input device, the application user interface being an interface
6 between a user and an internet application;
7 a data repository including a data record configured to store a value characterizing the
8 user customizable property, the value being user modifiable; and
9 an application designer configured to produce metadata for accessing the data record.
- 1 10. (New) The system of claim 9, further including an internet application system configured to
2 support the internet application.
- 1 11. (New) The system of claim 9, wherein a state of the user customizable property is
2 configured to persist between a displaying of the application user interface and another
3 displaying of the application user interface.
- 1 12. (New) The system of claim 9, wherein the customizable property is further responsive to an
2 identity of the user.

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- 1 17. (New) The system of claim 16, wherein the additional user interface element is a button.
- 1 18. (New) The system of claim 16, wherein the additional user interface element is an image.
- 1 19. (New) The system of claim 14, wherein the customizable tab-order property is configurable
2 according to a class of user interface elements.
- 1 20. (New) The system of claim 14, wherein the customizable tab-over property is configurable
2 according to the identity of a user.
- 1 21. (New) The system of claim 14, wherein the customizable tab-over property is configurable
2 according to the identity of a client.
- 1 22. (New) The system of claim 14, wherein the metadata is configured to characterize the tab-
2 over property of a specific application component.
- 1 23. (New) The system of claim 14, wherein the metadata includes a query for accessing the data
2 record.
- 1 24. (New) The system of claim 14, wherein the data is user modifiable using a personalization
2 system. integrated into the internet application.
- 1 25. (New) The system of claim 14, wherein the data record includes a reference to an additional
2 data record, the additional data record including additional data further characterizing the
3 customizable tab-order property.

1 26. (New) The system of claim 25, wherein the additional data is user modifiable.

1 27. (New) A customizable application system comprising:

2 an internet application system configured to support an internet application;

3 an application user interface including a user interface element, the application user
4 interface configured as an interface between the internet application and a user,
5 the user interface element including a user customizable tab-order property, the
6 user interface element configured for delivery to a client over a computer
7 network;

8 metadata characterizing the customizable tab-order property; and

9 a data repository including a data record configured to store a value characterizing the
10 customizable tab-order property, the value being user modifiable.

11 28. (New) The customizable application system of claim 27, wherein the client is configured to
2 display the application user interface using standard web browser protocols.

1 29. (New) The customizable application system of claim 27, wherein the client is configured to
2 display the application user interface using features of a web browser, the features not
3 requiring a browser add-on, plug-in, or extensions.

1 30. (New) The customizable application system of claim 27, further including means for
2 generating the application user interface using the metadata.

1 31. (New) The customizable application system of claim 27, wherein the data record includes
2 additional metadata.

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1 32. (New) The customizable application system of claim 27, further including a personalization
2 system configured to modify the data record.

1 33. (New) The customizable application system of claim 32, wherein the data repository
2 includes a user profile configured to store personalization data generated using the
3 personalization system.

1 34. (New) An internet application system comprising:
2 a user interface generator configured to generate a user interface including a user
3 interface element, the user interface being compatible with a standard web
4 browser and being generated in response to a request from a user, the user
5 interface element including a user customizable tab-order property;
6 a web application server configured to deliver the user interface to a client; and
7 an internet application accessible to the user through the generated user interface.

1 35. (New) The internet application system of claim 34, wherein the user interface generator is
2 further configured to use metadata for characterizing the customizable tab-order property.

1 36. (New) The internet application system of claim 34, wherein the customizable tab-order
2 property includes tab-over.

1 37. (New) The internet application system of claim 34, wherein the user interface generator is
2 further configured to use metadata for characterizing the tab-order property, the metadata
3 including a reference to a data record, the data record including a user defined parameter.

1 38. (New) The internet application system of claim 34, wherein the user interface generator is
2 configured to use a user modifiable data record for characterizing the tab-order property.

1 39. (New) The internet application system of claim 34, wherein the internet application includes
2 a configuration system configured to modify data characterizing the tab-order property.

1 40. (New) The internet application system of claim 34, wherein the client is a wireless system.

1 41. (New) An internet application comprising:
2 a computer program configured to run on an internet application system;
3 an application user interface including a user interface element with a customizable tab-
4 order property, the application user interface configured for delivery to a client
5 and to operate as an interface between a user and the internet application;
6 a user modifiable data record stored in a location physically remote from the client, the
7 data record configurable for use by a user interface generator to generate the
8 application user interface, the data record further configurable to characterize the
9 customizable tab-order property; and
10 metadata configurable for use by the user interface generator to access the user
11 modifiable data record.

1 42. (New) The internet application of claim 41, wherein the metadata includes a query.

1 43. (New) The internet application of claim 41, wherein the data record is further configured
2 such that generation of the application user interface is responsive to an identity of the
3 client.

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1 44. (New) The internet application of claim 41, wherein the data record is further configured
2 such that generation of the application user interface is responsive to an identity of the
3 user.

1 45. (New) The internet application of claim 41, wherein the data record is configurable using a
2 configuration interface.

1 46. (New) An application user interface between a user and an internet application, the
2 application user interface including a user interface element, the application user interface
3 further being generated using metadata and being configured for display using a standard
4 web browser, the metadata being configured to access a user modifiable data record that
5 includes a value characterizing a user customizable tab-order property, the user interface
6 element including the user customizable tab-order property.

1 47. (New) The application user interface of claim 46, wherein the value characterizing a user
2 customizable tab-order property is dependant on an identity of a user of the application
3 user interface.

1 48. (New) The application user interface of claim 46, wherein the user customizable tab-order
2 property includes tab-over configurable to be responsive to a class of user interface
3 elements.

1 49. (New) The application user interface of claim 46, wherein the application user interface is a
2 user profile interface.

1 50. (New) The application user interface of claim 46, further including means for displaying the
2 application user interface.

1 51. (New) A customizable application system comprising:
2 an internet application system configured to support an internet application, the internet
3 application including metadata configured for generating an application user
4 interface with a user interface element, the internet application system including,
5 a) an application server configured to generate the application user
6 interface, and
7 b) a web application server configured to deliver the application user
8 interface to a client;
9 an application development system configured to generated the metadata, the metadata
10 being further configured to access configuration data characterizing a tab-order
11 property of the user interface element;
12 a configuration system including a configuration engine and a configuration interface, the
13 configuration interface configured to modify the configuration data;
14 a data repository including a data record for storing the configuration data, the data
15 record being accessible using the metadata.

1 52. (New) A customizable application system comprising:

2 an internet application system configured to support an internet application, the internet
3 application associated with metadata configured for generating an application user
4 interface including a plurality of user interface elements having a tab-order
5 property, the internet application system including,

6 a) an application server configured to generate the application user
7 interface, and

8 b) a web application server configured to deliver the application user
9 interface to a client;

10 a personalization system including a personalization engine and a user profile interface,
11 the personalization interface configured for modification of personalization data
12 characterizing the tab-order property such that the tab-order of the plurality of
13 user interface elements is modified; and

14 a data repository including a data record for storing the personalization data, the data
15 record being accessible using the metadata.

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53. (New) A method of developing a user interface element, the method comprising the steps of:

selecting a customizable property;

including the customizable property in the user interface element;

determining a data record for holding a value to characterize the customizable property,

the data record being stored in a data repository and being user modifiable, the

data repository being physically remote from a client used to display an HTML

based application user interface;

generating metadata further characterizing the customizable property, the metadata

including a reference to the data record; and

storing the metadata in association with the user interface element, the user interface

element being configurable for inclusion in the HTML based application user

interface.

54. (New) The method of claim 53, wherein the application user interface is configured for

accessing an internet application.

55. (New) The method of claim 54, wherein the step of determining a data record is responsive

to the identity of a user.

56. (New) The method of claim 54, wherein the user modifiable data record is configured such

that the value used to characterize the customizable property persists between a

generation of the application user interface and another generation of the application user

interface.

1 57. (New) The method of claim 54, wherein the customizable property includes a response to a
2 user input device.

1 58. (New) The method of claim 53, wherein the customizable property includes tab-order.

1 59. (New) A method of developing an application user interface associated with an internet

2 application, the method comprising the steps of:

3 selecting a user customizable user interface element associated with a data record, the
4 data record being stored in a data repository and being user modifiable, the data
5 repository being physically remote from a client used to display the application
6 user interface;

7 including the user customizable user interface element in the application user interface;

8 generating metadata characterizing the user customizable user interface element, the
9 metadata including a reference to the data record; and

10 storing the metadata in association with the internet application, the internet application

11 being configured for access using the application user interface.

1 60. (New) The method of claim 59, wherein the application user interface is generated

2 responsive to the identity of a requestor.

1 61. (New) The method of claim 59, wherein the user modifiable data record is configured such

2 that a value stored in the data record and used to characterize the customizable property

3 persists between a generation of the application user interface and another generation of

4 the application user interface.

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1 62. (New) The method of claim 59, wherein a customizable property of the user customizable
2 user interface element includes a response to a user input device.

1 63. (New) The method of claim 59, wherein a customizable property of the user customizable
2 user interface element includes tab-order.

1 64. (New) A method of generating an application user interface, the method comprising the
2 steps of:
3 accessing a page definition, the page definition including metadata for defining a user
4 customizable property of the application user interface;
5 obtaining a reference to a user modifiable data record, using the metadata;
6 accessing the user modifiable data record using the reference, the data record being stored
7 in a data repository physically remote from a client used to display the customized
8 application user interface;
9 reading the data record to determine a value characterizing the user customizable
10 property;
11 generating markup-language responsive to the value; and
12 including the generated markup-language in the application user interface.

1 65. (New) The method of claim 64, wherein the application user interface is an interface to an
2 internet application.

1 66. (New) The method of claim 64, further including modifying the value using a configuration
2 system.

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- 1 67. (New) The method of claim 64, wherein the user customizable property is a response to a
2 user input device.
- 1 68. (New) The method of claim 64, wherein the user customizable property is tab-order.
- 1 69. (New) The method of claim 64, wherein the application user interface is configurable for
2 display using standard web browser protocols.
- 1 70. (New) A method of customizing tab-order in an HTML based application user interface, the
2 method comprising the steps of:
3 accessing a configuration system, the configuration system including a configuration
4 engine and a configuration interface;
5 selecting, using the configuration interface, a tab-order property of a user interface
6 element in the HTML based application user interface, the tab-order property
7 being user customizable; and
8 specifying configuration data using the configuration interface, the configuration data
9 characterizing the tab-order property and the configuration data being stored in a
10 data repository physically remote from a client used to display the HTML based
11 application user interface, the HTML based the application user interface being an
12 interface between a user and an internet application.
- 1 71. (New) The method of claim 70, wherein the tab-order property is a tab-over property.
- 1 72. (New) The method of claim 70, wherein the configuration data is configured such that a
2 state of the HTML based application user interface persists between a generation of the

HTML based application user interface and another generation of the HTML based application user interface.

73. (New) The method of claim 70, further including a step of modifying the configuration data using a personalization system.

74. (New) The method of claim 70, wherein the HTML based application user interface is displayed at the client without requiring a browser add-on, plug-in, or extension.

75. (New) A method of customizing tab-order in an application user interface, the method comprising the steps of:
accessing a configuration system, the configuration system including a configuration engine and a configuration interface;
selecting, using the configuration interface, a tab-order property of a user interface element in the application user interface, the tab-order property being user customizable;
specifying configuration data using the configuration interface, the configuration data characterizing the tab-order property; and
generating the application user interface using the specified configuration data, the application user interface being HTML based and being configured to access an internet application.

76. (New) The method of claim 75, further including displaying the application user interface using standard web browser protocols.

1 89. (New) The method of claim 85, wherein a state of the customizable tab-order property
2 persists between a generation of the application user interface and another generation of
3 the application user interface.

1 90. (New) The method of claim 85, further including identifying a requestor of the application
2 user interface, wherein the step of reading a value is responsive to an identity of the
3 requestor.

1 91. (New) A method of generating an application user interface configured for delivery from a
2 server to a client, the method comprising the steps of:
3 receiving, at the server, a request for the application user interface from the client, the
4 application user interface including a user interface element;
5 identifying the requester of the application user interface;
6 accessing a page definition, the page definition including metadata and defining the
7 application user interface;
8 retrieving, using the metadata and the identity of the requester, a value relating to a user
9 customizable tab-order property of the user interface element, the value being
10 stored in a data repository physically remote from the client;
11 generating HTML or Java script using the value; and
12 including the HTML or Java script in the application user interface.

1 92. (New) The method of claim 91, wherein the user customizable tab-order property is a user
2 customizable tab-over property.

1 93. (New) The method of claim 91, further including displaying the application user interface at
2 the client using standard web browser protocols.

1 94. (New) A computer readable medium including an internet application, the internet
2 application comprising:
3 metadata defining an application user interface, the application user interface including a
4 user interface element with a user customizable tab-order property, the application
5 user interface configured for delivery to a client and configured to operate as an
6 interface between a user and the internet application;
7 a user interface generator configured to generate the application user interface using a
8 user modifiable data record stored in a location physically remote from the client,
9 the user modifiable data record configurable to characterize the user customizable
10 tab-order property; and
11 a configuration system configured for a user to modify the user modifiable data record.

1 95. (New) A computer readable medium including an internet application, the internet
2 application comprising:
3 an application designer configured to develop an application user interface, the
4 application user interface including a user interface element with a user
5 customizable tab-order property, the application user interface configured for
6 delivery to a client and configured to operate as an interface between a user and
7 the internet application;
8 a user interface generator configured to generate the application user interface using a
9 user modifiable data record stored in a location physically remote from the client,
10 the user modifiable data record configurable to characterize the user customizable
11 tab-order property; and
12 a configuration system configured for a user to modify the user modifiable data record.

1 96. (New) An application execution system comprising:
2 means for supporting an internet application;
3 means for generating an application user interface using a user modifiable data record
4 configured to store data characterizing a user customizable tab-order property;
5 and
6 means for providing the application user interface to a user, the application user interface
7 including a user interface element, the application user interface configured as an
8 interface between the internet application and the user, the user interface element
9 including the user customizable tab-order property, the user interface element
10 configured for delivery to a client over a computer network.

REMARKS

The present application is U.S. Patent Application Serial No. 10/040,397 (hereinafter the "'097 Application"). This Preliminary Amendment is being filed prior to receipt of the first Office Action. The '097 Application contained claims 1-3, which are canceled by this amendment without prejudice. In addition, this Preliminary Amendment adds new claims 4-96. Therefore, claims 4-96 are presented for consideration. No new matter has been added by these amendments. All the pending claims comply with all the requirements of 35 U.S.C. Accordingly, Applicant requests examination and allowance of all pending claims.

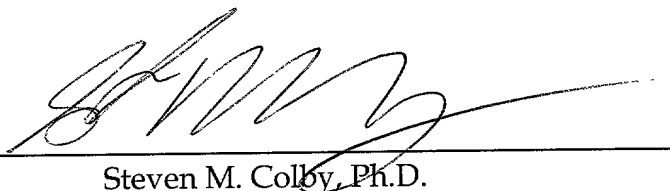
The Examiner is respectfully requested to enter this Amendment and to examine the pending claims. The Examiner is respectfully urged to consider the claimed invention at the earliest time possible and issue a favorable action indicating the application is in condition for allowance. If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone Applicant's undersigned representative at the number given below.

Respectfully submitted,

Allan Ballard et al.

Date: _____

By: _____


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